

SEQUENCE LISTING

<110> TAKARA BIO INC.

<120> Process for the preparation of lymphocyte having cytotoxic activity

<130> 04-058-PCTJP

<150> JP 2003-298208

<151> 2003-08-22

<150> JP 2004-699

<151> 2004-01-05

<150> JP 2004-115648

<151> 2004-04-09

<150> JP 2004-222441

<151> 2004-07-29

<160> 29

<210> 1

<211> 87

<212> PRT

<213> Artificial Sequence

<220>

<223> partial region of fibronectin named III-8

<400> 1

Pro Thr Asp Leu Arg Phe Thr Asn Ile Gly Pro Asp Thr Met Arg

1 5 10 15

Val Thr Trp Ala Pro Pro Pro Ser Ile Asp Leu Thr Asn Phe Leu

20 25 30

Val Arg Tyr Ser Pro Val Lys Asn Glu Glu Asp Val Ala Glu Leu

35 40 45

Ser Ile Ser Pro Ser Asp Asn Ala Val Val Leu Thr Asn Leu Leu

50 55 60

Pro Gly Thr Glu Tyr Val Val Ser Val Ser Ser Val Tyr Glu Gln

65 70 75

His Glu Ser Thr Pro Leu Arg Gly Arg Gln Lys Thr

80 85

<210> 2

<211> 90

<212> PRT

<213> Artificial Sequence

<220>

<223> partial region of fibronectin named III-9

<400> 2

Gly	Leu	Asp	Ser	Pro	Thr	Gly	Ile	Asp	Phe	Ser	Asp	Ile	Thr	Ala
1				5					10					15
Asn	Ser	Phe	Thr	Val	His	Trp	Ile	Ala	Pro	Arg	Ala	Thr	Ile	Thr
				20					25					30
Gly	Tyr	Arg	Ile	Arg	His	His	Pro	Glu	His	Phe	Ser	Gly	Arg	Pro
				35					40					45
Arg	Glu	Asp	Arg	Val	Pro	His	Ser	Arg	Asn	Ser	Ile	Thr	Leu	Thr
				50					55					60
Asn	Leu	Thr	Pro	Gly	Thr	Glu	Tyr	Val	Val	Ser	Ile	Val	Ala	Leu
				65					70					75
Asn	Gly	Arg	Glu	Glu	Ser	Pro	Leu	Leu	Ile	Gly	Gln	Gln	Ser	Thr
				80					85					90

<210> 3

<211> 94

<212> PRT

<213> Artificial Sequence

<220>

<223> partial region of fibronectin named III-10

<400> 3

Val	Ser	Asp	Val	Pro	Arg	Asp	Leu	Glu	Val	Val	Ala	Ala	Thr	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1	5	10	15
Thr Ser Leu Leu Ile Ser Trp Asp Ala Pro Ala Val Thr Val Arg			
	20	25	30
Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val			
	35	40	45
Gln Glu Phe Thr Val Pro Gly Ser Lys Ser Thr Ala Thr Ile Ser			
	50	55	60
Gly Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val			
	65	70	75
Thr Gly Arg Gly Asp Ser Pro Ala Ser Ser Lys Pro Ile Ser Ile			
	80	85	90
Asn Tyr Arg Thr			

<210> 4

<211> 84

<212> PRT

<213> Artificial Sequence

<220>

<223> partial region of fibronectin named III-11

<400> 4

Gln Met Gln Val Thr Asp Val Gln Asp Asn Ser Ile Ser Val Lys
1 5 10 15
Trp Leu Pro Ser Ser Ser Pro Val Thr Gly Tyr Arg Val Thr Thr

	20		25		30									
Thr	Pro	Lys	Asn	Gly	Pro	Gly	Pro	Thr	Lys	Thr	Lys	Thr	Ala	Gly
	35		40		45									
Pro	Asp	Gln	Thr	Glu	Met	Thr	Ile	Glu	Gly	Leu	Gln	Pro	Thr	Val
	50		55		60									
Glu	Tyr	Val	Val	Ser	Val	Tyr	Ala	Gln	Asn	Pro	Ser	Gly	Glu	Ser
	65		70		75									
Gln	Pro	Leu	Val	Gln	Thr	Ala	Val	Thr						
	80													

<210> 5

<211> 92

<212> PRT

<213> Artificial Sequence

<220>

<223> partial region of fibronectin named III-12

<400> 5

Ala	Ile	Pro	Ala	Pro	Thr	Asp	Leu	Lys	Phe	Thr	Gln	Val	Thr	Pro
1			5				10				15			
Thr	Ser	Leu	Ser	Ala	Gln	Trp	Thr	Pro	Pro	Asn	Val	Gln	Leu	Thr
			20				25				30			
Gly	Tyr	Arg	Val	Arg	Val	Thr	Pro	Lys	Glu	Lys	Thr	Gly	Pro	Met
			35				40				45			

Lys Glu Ile Asn Leu Ala Pro Asp Ser Ser Ser Val Val Val Ser
 50 55 60
 Gly Leu Met Val Ala Thr Lys Tyr Glu Val Ser Val Tyr Ala Leu
 65 70 75
 Lys Asp Thr Leu Thr Ser Arg Pro Ala Gln Gly Val Val Thr Thr
 80 85 90
 Leu Glu

<210> 6

<211> 89

<212> PRT

<213> Artificial Sequence

<220>

<223> partial region of fibronectin named III-13

<400> 6

Asn Val Ser Pro Pro Arg Arg Ala Arg Val Thr Asp Ala Thr Glu
 1 5 10 15
 Thr Thr Ile Thr Ile Ser Trp Arg Thr Lys Thr Glu Thr Ile Thr
 20 25 30
 Gly Phe Gln Val Asp Ala Val Pro Ala Asn Gly Gln Thr Pro Ile
 35 40 45
 Gln Arg Thr Ile Lys Pro Asp Val Arg Ser Tyr Thr Ile Thr Gly
 50 55 60

Leu Gln Pro Gly Thr Asp Tyr Lys Ile Tyr Leu Tyr Thr Leu Asn
 65 70 75
 Asp Asn Ala Arg Ser Ser Pro Val Val Ile Asp Ala Ser Thr
 80 85

<210> 7

<211> 90

<212> PRT

<213> Artificial Sequence

<220>

<223> partial region of fibronectin named III-14

<400> 7

Ala Ile Asp Ala Pro Ser Asn Leu Arg Phe Leu Ala Thr Thr Pro
 1 5 10 15
 Asn Ser Leu Leu Val Ser Trp Gln Pro Pro Arg Ala Arg Ile Thr
 20 25 30
 Gly Tyr Ile Ile Lys Tyr Glu Lys Pro Gly Ser Pro Pro Arg Glu
 35 40 45
 Val Val Pro Arg Pro Arg Pro Gly Val Thr Glu Ala Thr Ile Thr
 50 55 60
 Gly Leu Glu Pro Gly Thr Glu Tyr Thr Ile Tyr Val Ile Ala Leu
 65 70 75
 Lys Asn Asn Gln Lys Ser Glu Pro Leu Ile Gly Arg Lys Lys Thr

80

85

90

<210> 8

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> partial region of fibronectin named CS-1

<400> 8

Asp Glu Leu Pro Gln Leu Val Thr Leu Pro His Pro Asn Leu His

1

5

10

15

Gly Pro Glu Ile Leu Asp Val Pro Ser Thr

20

25

<210> 9

<211> 274

<212> PRT

<213> Human

<220>

<223> fibronectin fragment named C-274

<400> 9

Pro Thr Asp Leu Arg Phe Thr Asn Ile Gly Pro Asp Thr Met Arg			
1	5	10	15
Val Thr Trp Ala Pro Pro Pro Ser Ile Asp Leu Thr Asn Phe Leu			
	20	25	30
Val Arg Tyr Ser Pro Val Lys Asn Glu Glu Asp Val Ala Glu Leu			
	35	40	45
Ser Ile Ser Pro Ser Asp Asn Ala Val Val Leu Thr Asn Leu Leu			
	50	55	60
Pro Gly Thr Glu Tyr Val Val Ser Val Ser Ser Val Tyr Glu Gln			
	65	70	75
His Glu Ser Thr Pro Leu Arg Gly Arg Gln Lys Thr Gly Leu Asp			
	80	85	90
Ser Pro Thr Gly Ile Asp Phe Ser Asp Ile Thr Ala Asn Ser Phe			
	95	100	105
Thr Val His Trp Ile Ala Pro Arg Ala Thr Ile Thr Gly Tyr Arg			
	110	115	120
Ile Arg His His Pro Glu His Phe Ser Gly Arg Pro Arg Glu Asp			
	125	130	135
Arg Val Pro His Ser Arg Asn Ser Ile Thr Leu Thr Asn Leu Thr			
	140	145	150
Pro Gly Thr Glu Tyr Val Val Ser Ile Val Ala Leu Asn Gly Arg			
	155	160	165
Glu Glu Ser Pro Leu Leu Ile Gly Gln Gln Ser Thr Val Ser Asp			
	170	175	180
Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr Pro Thr Ser Leu			

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20	25	30
Gly Tyr Arg Val Arg Val Thr Pro Lys Glu Lys Thr Gly Pro Met		
35	40	45
Lys Glu Ile Asn Leu Ala Pro Asp Ser Ser Ser Val Val Val Ser		
50	55	60
Gly Leu Met Val Ala Thr Lys Tyr Glu Val Ser Val Tyr Ala Leu		
65	70	75
Lys Asp Thr Leu Thr Ser Arg Pro Ala Gln Gly Val Val Thr Thr		
80	85	90
Leu Glu Asn Val Ser Pro Pro Arg Arg Ala Arg Val Thr Asp Ala		
95	100	105
Thr Glu Thr Thr Ile Thr Ile Ser Trp Arg Thr Lys Thr Glu Thr		
110	115	120
Ile Thr Gly Phe Gln Val Asp Ala Val Pro Ala Asn Gly Gln Thr		
125	130	135
Pro Ile Gln Arg Thr Ile Lys Pro Asp Val Arg Ser Tyr Thr Ile		
140	145	150
Thr Gly Leu Gln Pro Gly Thr Asp Tyr Lys Ile Tyr Leu Tyr Thr		
155	160	165
Leu Asn Asp Asn Ala Arg Ser Ser Pro Val Val Ile Asp Ala Ser		
170	175	180
Thr Ala Ile Asp Ala Pro Ser Asn Leu Arg Phe Leu Ala Thr Thr		
185	190	195
Pro Asn Ser Leu Leu Val Ser Trp Gln Pro Pro Arg Ala Arg Ile		
200	205	210
Thr Gly Tyr Ile Ile Lys Tyr Glu Lys Pro Gly Ser Pro Pro Arg		

215	220	225
Glu Val Val Pro Arg Pro Arg Pro Gly Val Thr Glu Ala Thr Ile		
230	235	240
Thr Gly Leu Glu Pro Gly Thr Glu Tyr Thr Ile Tyr Val Ile Ala		
245	250	255
Leu Lys Asn Asn Gln Lys Ser Glu Pro Leu Ile Gly Arg Lys Lys		
260	265	270
Thr		

<210> 11

<211> 296

<212> PRT

<213> Artificial Sequence

<220>

<223> fibronectin fragment named H-296

<400> 1-1

Ala	Ile	Pro	Ala	Pro	Thr	Asp	Leu	Lys	Phe	Thr	Gln	Val	Thr	Pro
1				5						10				15
Thr	Ser	Leu	Ser	Ala	Gln	Trp	Thr	Pro	Pro	Asn	Val	Gln	Leu	Thr
				20						25				30
Gly	Tyr	Arg	Val	Arg	Val	Thr	Pro	Lys	Glu	Lys	Thr	Gly	Pro	Met
				35						40				45
Lys	Glu	Ile	Asn	Leu	Ala	Pro	Asp	Ser	Ser	Ser	Val	Val	Val	Ser

50	55	60
Gly Leu Met Val Ala Thr Lys Tyr Glu Val Ser Val Tyr Ala Leu		
65	70	75
Lys Asp Thr Leu Thr Ser Arg Pro Ala Gln Gly Val Val Thr Thr		
80	85	90
Leu Glu Asn Val Ser Pro Pro Arg Arg Ala Arg Val Thr Asp Ala		
95	100	105
Thr Glu Thr Thr Ile Thr Ile Ser Trp Arg Thr Lys Thr Glu Thr		
110	115	120
Ile Thr Gly Phe Gln Val Asp Ala Val Pro Ala Asn Gly Gln Thr		
125	130	135
Pro Ile Gln Arg Thr Ile Lys Pro Asp Val Arg Ser Tyr Thr Ile		
140	145	150
Thr Gly Leu Gln Pro Gly Thr Asp Tyr Lys Ile Tyr Leu Tyr Thr		
155	160	165
Leu Asn Asp Asn Ala Arg Ser Ser Pro Val Val Ile Asp Ala Ser		
170	175	180
Thr Ala Ile Asp Ala Pro Ser Asn Leu Arg Phe Leu Ala Thr Thr		
185	190	195
Pro Asn Ser Leu Leu Val Ser Trp Gln Pro Pro Arg Ala Arg Ile		
200	205	210
Thr Gly Tyr Ile Ile Lys Tyr Glu Lys Pro Gly Ser Pro Pro Arg		
215	220	225
Glu Val Val Pro Arg Pro Arg Pro Gly Val Thr Glu Ala Thr Ile		
230	235	240
Thr Gly Leu Glu Pro Gly Thr Glu Tyr Thr Ile Tyr Val Ile Ala		

245	250	255
Leu Lys Asn Asn Gln Lys Ser Glu Pro Leu Ile Gly Arg Lys Lys		
260	265	270
Thr Asp Glu Leu Pro Gln Leu Val Thr Leu Pro His Pro Asn Leu		
275	280	285
His Gly Pro Glu Ile Leu Asp Val Pro Ser Thr		
290	295	

<210> 12

<211> 549

<212> PRT

<213> Artificial Sequence

<220>

<223> fibronectin fragment named CH-271

<400> 12

Pro Thr Asp Leu Arg Phe Thr Asn Ile Gly Pro Asp Thr Met Arg		
1	5	10
Val Thr Trp Ala Pro Pro Pro Ser Ile Asp Leu Thr Asn Phe Leu		
20	25	30
Val Arg Tyr Ser Pro Val Lys Asn Glu Glu Asp Val Ala Glu Leu		
35	40	45
Ser Ile Ser Pro Ser Asp Asn Ala Val Val Leu Thr Asn Leu Leu		
50	55	60

Pro Gly Thr Glu Tyr Val Val Ser Val Ser Ser Val Tyr Glu Gln			
	65	70	75
His Glu Ser Thr Pro Leu Arg Gly Arg Gln Lys Thr Gly Leu Asp			
	80	85	90
Ser Pro Thr Gly Ile Asp Phe Ser Asp Ile Thr Ala Asn Ser Phe			
	95	100	105
Thr Val His Trp Ile Ala Pro Arg Ala Thr Ile Thr Gly Tyr Arg			
	110	115	120
Ile Arg His His Pro Glu His Phe Ser Gly Arg Pro Arg Glu Asp			
	125	130	135
Arg Val Pro His Ser Arg Asn Ser Ile Thr Leu Thr Asn Leu Thr			
	140	145	150
Pro Gly Thr Glu Tyr Val Val Ser Ile Val Ala Leu Asn Gly Arg			
	155	160	165
Glu Glu Ser Pro Leu Leu Ile Gly Gln Gln Ser Thr Val Ser Asp			
	170	175	180
Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr Pro Thr Ser Leu			
	185	190	195
Leu Ile Ser Trp Asp Ala Pro Ala Val Thr Val Arg Tyr Tyr Arg			
	200	205	210
Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu Phe			
	215	220	225
Thr Val Pro Gly Ser Lys Ser Thr Ala Thr Ile Ser Gly Leu Lys			
	230	235	240
Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Gly Arg			
	245	250	255

Gly Asp Ser Pro Ala Ser Ser Lys Pro Ile Ser Ile Asn Tyr Arg		
260	265	270
Thr Glu Ile Asp Lys Pro Ser Met Ala Ile Pro Ala Pro Thr Asp		
275	280	285
Leu Lys Phe Thr Gln Val Thr Pro Thr Ser Leu Ser Ala Gln Trp		
290	295	300
Thr Pro Pro Asn Val Gln Leu Thr Gly Tyr Arg Val Arg Val Thr		
305	310	315
Pro Lys Glu Lys Thr Gly Pro Met Lys Glu Ile Asn Leu Ala Pro		
320	325	330
Asp Ser Ser Ser Val Val Val Ser Gly Leu Met Val Ala Thr Lys		
335	340	345
Tyr Glu Val Ser Val Tyr Ala Leu Lys Asp Thr Leu Thr Ser Arg		
350	355	360
Pro Ala Gln Gly Val Val Thr Thr Leu Glu Asn Val Ser Pro Pro		
365	370	375
Arg Arg Ala Arg Val Thr Asp Ala Thr Glu Thr Thr Ile Thr Ile		
380	385	390
Ser Trp Arg Thr Lys Thr Glu Thr Ile Thr Gly Phe Gln Val Asp		
395	400	405
Ala Val Pro Ala Asn Gly Gln Thr Pro Ile Gln Arg Thr Ile Lys		
410	415	420
Pro Asp Val Arg Ser Tyr Thr Ile Thr Gly Leu Gln Pro Gly Thr		
425	430	435
Asp Tyr Lys Ile Tyr Leu Tyr Thr Leu Asn Asp Asn Ala Arg Ser		
440	445	450

Ser Pro Val Val Ile Asp Ala Ser Thr Ala Ile Asp Ala Pro Ser
455 460 465
Asn Leu Arg Phe Leu Ala Thr Thr Pro Asn Ser Leu Leu Val Ser
470 475 480
Trp Gln Pro Pro Arg Ala Arg Ile Thr Gly Tyr Ile Ile Lys Tyr
485 490 495
Glu Lys Pro Gly Ser Pro Pro Arg Glu Val Val Pro Arg Pro Arg
500 505 510
Pro Gly Val Thr Glu Ala Thr Ile Thr Gly Leu Glu Pro Gly Thr
515 520 525
Glu Tyr Thr Ile Tyr Val Ile Ala Leu Lys Asn Asn Gln Lys Ser
530 535 540
Glu Pro Leu Ile Gly Arg Lys Lys Thr
545

<210> 13

<211> 574

<212> PRT

<213> Artificial Sequence

<220>

<223> fibronectin fragment named CH-296

<400> 13

Pro Thr Asp Leu Arg Phe Thr Asn Ile Gly Pro Asp Thr Met Arg

1	5	10	15
Val Thr Trp Ala Pro Pro Pro Ser Ile Asp Leu Thr Asn Phe Leu			
	20	25	30
Val Arg Tyr Ser Pro Val Lys Asn Glu Glu Asp Val Ala Glu Leu			
	35	40	45
Ser Ile Ser Pro Ser Asp Asn Ala Val Val Leu Thr Asn Leu Leu			
	50	55	60
Pro Gly Thr Glu Tyr Val Val Ser Val Ser Ser Val Tyr Glu Gln			
	65	70	75
His Glu Ser Thr Pro Leu Arg Gly Arg Gln Lys Thr Gly Leu Asp			
	80	85	90
Ser Pro Thr Gly Ile Asp Phe Ser Asp Ile Thr Ala Asn Ser Phe			
	95	100	105
Thr Val His Trp Ile Ala Pro Arg Ala Thr Ile Thr Gly Tyr Arg			
	110	115	120
Ile Arg His His Pro Glu His Phe Ser Gly Arg Pro Arg Glu Asp			
	125	130	135
Arg Val Pro His Ser Arg Asn Ser Ile Thr Leu Thr Asn Leu Thr			
	140	145	150
Pro Gly Thr Glu Tyr Val Val Ser Ile Val Ala Leu Asn Gly Arg			
	155	160	165
Glu Glu Ser Pro Leu Leu Ile Gly Gln Gln Ser Thr Val Ser Asp			
	170	175	180
Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr Pro Thr Ser Leu			
	185	190	195
Leu Ile Ser Trp Asp Ala Pro Ala Val Thr Val Arg Tyr Tyr Arg			

200	205	210
Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu Phe		
215	220	225
Thr Val Pro Gly Ser Lys Ser Thr Ala Thr Ile Ser Gly Leu Lys		
230	235	240
Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Gly Arg		
245	250	255
Gly Asp Ser Pro Ala Ser Ser Lys Pro Ile Ser Ile Asn Tyr Arg		
260	265	270
Thr Glu Ile Asp Lys Pro Ser Met Ala Ile Pro Ala Pro Thr Asp		
275	280	285
Leu Lys Phe Thr Gln Val Thr Pro Thr Ser Leu Ser Ala Gln Trp		
290	295	300
Thr Pro Pro Asn Val Gln Leu Thr Gly Tyr Arg Val Arg Val Thr		
305	310	315
Pro Lys Glu Lys Thr Gly Pro Met Lys Glu Ile Asn Leu Ala Pro		
320	325	330
Asp Ser Ser Ser Val Val Val Ser Gly Leu Met Val Ala Thr Lys		
335	340	345
Tyr Glu Val Ser Val Tyr Ala Leu Lys Asp Thr Leu Thr Ser Arg		
350	355	360
Pro Ala Gln Gly Val Val Thr Thr Leu Glu Asn Val Ser Pro Pro		
365	370	375
Arg Arg Ala Arg Val Thr Asp Ala Thr Glu Thr Thr Ile Thr Ile		
380	385	390
Ser Trp Arg Thr Lys Thr Glu Thr Ile Thr Gly Phe Gln Val Asp		

395	400	405
Ala Val Pro Ala Asn Gly Gln Thr Pro Ile Gln Arg Thr Ile Lys		
410	415	420
Pro Asp Val Arg Ser Tyr Thr Ile Thr Gly Leu Gln Pro Gly Thr		
425	430	435
Asp Tyr Lys Ile Tyr Leu Tyr Thr Leu Asn Asp Asn Ala Arg Ser		
440	445	450
Ser Pro Val Val Ile Asp Ala Ser Thr Ala Ile Asp Ala Pro Ser		
455	460	465
Asn Leu Arg Phe Leu Ala Thr Thr Pro Asn Ser Leu Leu Val Ser		
470	475	480
Trp Gln Pro Pro Arg Ala Arg Ile Thr Gly Tyr Ile Ile Lys Tyr		
485	490	495
Glu Lys Pro Gly Ser Pro Pro Arg Glu Val Val Pro Arg Pro Arg		
500	505	510
Pro Gly Val Thr Glu Ala Thr Ile Thr Gly Leu Glu Pro Gly Thr		
515	520	525
Glu Tyr Thr Ile Tyr Val Ile Ala Leu Lys Asn Asn Gln Lys Ser		
530	535	540
Glu Pro Leu Ile Gly Arg Lys Lys Thr Asp Glu Leu Pro Gln Leu		
545	550	555
Val Thr Leu Pro His Pro Asn Leu His Gly Pro Glu Ile Leu Asp		
560	565	570
Val Pro Ser Thr		

<210> 14

<211> 302

<212> PRT

<213> Artificial Sequence

<220>

<223> fibronectin fragment named C-CS1

<400> 14

Pro	Thr	Asp	Leu	Arg	Phe	Thr	Asn	Ile	Gly	Pro	Asp	Thr	Met	Arg
1				5					10					15
Val	Thr	Trp	Ala	Pro	Pro	Pro	Ser	Ile	Asp	Leu	Thr	Asn	Phe	Leu
				20					25					30
Val	Arg	Tyr	Ser	Pro	Val	Lys	Asn	Glu	Glu	Asp	Val	Ala	Glu	Leu
				35					40					45
Ser	Ile	Ser	Pro	Ser	Asp	Asn	Ala	Val	Val	Leu	Thr	Asn	Leu	Leu
				50					55					60
Pro	Gly	Thr	Glu	Tyr	Val	Val	Ser	Val	Ser	Ser	Val	Tyr	Glu	Gln
				65					70					75
His	Glu	Ser	Thr	Pro	Leu	Arg	Gly	Arg	Gln	Lys	Thr	Gly	Leu	Asp
				80					85					90
Ser	Pro	Thr	Gly	Ile	Asp	Phe	Ser	Asp	Ile	Thr	Ala	Asn	Ser	Phe
				95					100					105
Thr	Val	His	Trp	Ile	Ala	Pro	Arg	Ala	Thr	Ile	Thr	Gly	Tyr	Arg
				110					115					120
Ile	Arg	His	His	Pro	Glu	His	Phe	Ser	Gly	Arg	Pro	Arg	Glu	Asp

125	130	135
Arg Val Pro His Ser Arg Asn Ser Ile Thr Leu Thr Asn Leu Thr		
140	145	150
Pro Gly Thr Glu Tyr Val Val Ser Ile Val Ala Leu Asn Gly Arg		
155	160	165
Glu Glu Ser Pro Leu Leu Ile Gly Gln Gln Ser Thr Val Ser Asp		
170	175	180
Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr Pro Thr Ser Leu		
185	190	195
Leu Ile Ser Trp Asp Ala Pro Ala Val Thr Val Arg Tyr Tyr Arg		
200	205	210
Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu Phe		
215	220	225
Thr Val Pro Gly Ser Lys Ser Thr Ala Thr Ile Ser Gly Leu Lys		
230	235	240
Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Gly Arg		
245	250	255
Gly Asp Ser Pro Ala Ser Ser Lys Pro Ile Ser Ile Asn Tyr Arg		
260	265	270
Thr Glu Ile Asp Lys Pro Ser Asp Glu Leu Pro Gln Leu Val Thr		
275	280	285
Leu Pro His Pro Asn Leu His Gly Pro Glu Ile Leu Asp Val Pro		
290	295	300
Ser Thr		

<210> 15

<211> 367

<212> PRT

<213> Artificial Sequence

<220>

<223> fibronectin fragment named CHV-89

<400> 15

Pro Thr Asp Leu Arg Phe Thr Asn Ile Gly Pro Asp Thr Met Arg

1 5 10 15

Val Thr Trp Ala Pro Pro Pro Ser Ile Asp Leu Thr Asn Phe Leu

20 25 30

Val Arg Tyr Ser Pro Val Lys Asn Glu Glu Asp Val Ala Glu Leu

35 40 45

Ser Ile Ser Pro Ser Asp Asn Ala Val Val Leu Thr Asn Leu Leu

50 55 60

Pro Gly Thr Glu Tyr Val Val Ser Val Ser Ser Val Tyr Glu Gln

65 70 75

His Glu Ser Thr Pro Leu Arg Gly Arg Gln Lys Thr Gly Leu Asp

80 85 90

Ser Pro Thr Gly Ile Asp Phe Ser Asp Ile Thr Ala Asn Ser Phe

95 100 105

Thr Val His Trp Ile Ala Pro Arg Ala Thr Ile Thr Gly Tyr Arg

110 115 120

Ile Arg His His Pro Glu His Phe Ser Gly Arg Pro Arg Glu Asp

125	130	135
Arg Val Pro His Ser Arg Asn Ser Ile Thr Leu Thr Asn Leu Thr		
140	145	150
Pro Gly Thr Glu Tyr Val Val Ser Ile Val Ala Leu Asn Gly Arg		
155	160	165
Glu Glu Ser Pro Leu Leu Ile Gly Gln Gln Ser Thr Val Ser Asp		
170	175	180
Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr Pro Thr Ser Leu		
185	190	195
Leu Ile Ser Trp Asp Ala Pro Ala Val Thr Val Arg Tyr Tyr Arg		
200	205	210
Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu Phe		
215	220	225
Thr Val Pro Gly Ser Lys Ser Thr Ala Thr Ile Ser Gly Leu Lys		
230	235	240
Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Gly Arg		
245	250	255
Gly Asp Ser Pro Ala Ser Ser Lys Pro Ile Ser Ile Asn Tyr Arg		
260	265	270
Thr Glu Ile Asp Lys Pro Ser Met Asn Val Ser Pro Pro Arg Arg		
275	280	285
Ala Arg Val Thr Asp Ala Thr Glu Thr Thr Ile Thr Ile Ser Trp		
290	295	300
Arg Thr Lys Thr Glu Thr Ile Thr Gly Phe Gln Val Asp Ala Val		
305	310	315
Pro Ala Asn Gly Gln Thr Pro Ile Gln Arg Thr Ile Lys Pro Asp		

320	325	330
Val Arg Ser Tyr Thr Ile Thr Gly Leu Gln Pro Gly Thr Asp Tyr		
335	340	345
Lys Ile Tyr Leu Tyr Thr Leu Asn Asp Asn Ala Arg Ser Ser Pro		
350	355	360
Val Val Ile Asp Ala Ser Thr		
365		

<210> 16

<211> 368

<212> PRT

<213> Artificial Sequence

<220>

<223> fibronectin fragment named CHV-90

<400> 16

Pro Thr Asp Leu Arg Phe Thr Asn Ile Gly Pro Asp Thr Met Arg		
1	5	10
Val Thr Trp Ala Pro Pro Pro Ser Ile Asp Leu Thr Asn Phe Leu		
20	25	30
Val Arg Tyr Ser Pro Val Lys Asn Glu Glu Asp Val Ala Glu Leu		
35	40	45
Ser Ile Ser Pro Ser Asp Asn Ala Val Val Leu Thr Asn Leu Leu		
50	55	60

Pro Gly Thr Glu Tyr Val Val Ser Val Ser Ser Val Tyr Glu Gln			
	65	70	75
His Glu Ser Thr Pro Leu Arg Gly Arg Gln Lys Thr Gly Leu Asp			
	80	85	90
Ser Pro Thr Gly Ile Asp Phe Ser Asp Ile Thr Ala Asn Ser Phe			
	95	100	105
Thr Val His Trp Ile Ala Pro Arg Ala Thr Ile Thr Gly Tyr Arg			
	110	115	120
Ile Arg His His Pro Glu His Phe Ser Gly Arg Pro Arg Glu Asp			
	125	130	135
Arg Val Pro His Ser Arg Asn Ser Ile Thr Leu Thr Asn Leu Thr			
	140	145	150
Pro Gly Thr Glu Tyr Val Val Ser Ile Val Ala Leu Asn Gly Arg			
	155	160	165
Glu Glu Ser Pro Leu Leu Ile Gly Gln Gln Ser Thr Val Ser Asp			
	170	175	180
Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr Pro Thr Ser Leu			
	185	190	195
Leu Ile Ser Trp Asp Ala Pro Ala Val Thr Val Arg Tyr Tyr Arg			
	200	205	210
Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu Phe			
	215	220	225
Thr Val Pro Gly Ser Lys Ser Thr Ala Thr Ile Ser Gly Leu Lys			
	230	235	240
Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Gly Arg			
	245	250	255

Gly Asp Ser Pro Ala Ser Ser Lys Pro Ile Ser Ile Asn Tyr Arg
260 265 270
Thr Glu Ile Asp Lys Pro Ser Met Ala Ile Asp Ala Pro Ser Asn
275 280 285
Leu Arg Phe Leu Ala Thr Thr Pro Asn Ser Leu Leu Val Ser Trp
290 295 300
Gln Pro Pro Arg Ala Arg Ile Thr Gly Tyr Ile Ile Lys Tyr Glu
305 310 315
Lys Pro Gly Ser Pro Pro Arg Glu Val Val Pro Arg Pro Arg Pro
320 325 330
Gly Val Thr Glu Ala Thr Ile Thr Gly Leu Glu Pro Gly Thr Glu
335 340 345
Tyr Thr Ile Tyr Val Ile Ala Leu Lys Asn Asn Gln Lys Ser Glu
350 355 360
Pro Leu Ile Gly Arg Lys Lys Thr
365

<210> 17

<211> 370

<212> PRT

<213> Artificial Sequence

<220>

<223> fibronectin fragment named CHV-92

<400> 17

Pro	Thr	Asp	Leu	Arg	Phe	Thr	Asn	Ile	Gly	Pro	Asp	Thr	Met	Arg
1				5					10					15
Val	Thr	Trp	Ala	Pro	Pro	Pro	Ser	Ile	Asp	Leu	Thr	Asn	Phe	Leu
				20					25					30
Val	Arg	Tyr	Ser	Pro	Val	Lys	Asn	Glu	Glu	Asp	Val	Ala	Glu	Leu
				35					40					45
Ser	Ile	Ser	Pro	Ser	Asp	Asn	Ala	Val	Val	Leu	Thr	Asn	Leu	Leu
				50					55					60
Pro	Gly	Thr	Glu	Tyr	Val	Val	Ser	Val	Ser	Ser	Val	Tyr	Glu	Gln
				65					70					75
His	Glu	Ser	Thr	Pro	Leu	Arg	Gly	Arg	Gln	Lys	Thr	Gly	Leu	Asp
				80					85					90
Ser	Pro	Thr	Gly	Ile	Asp	Phe	Ser	Asp	Ile	Thr	Ala	Asn	Ser	Phe
				95					100					105
Thr	Val	His	Trp	Ile	Ala	Pro	Arg	Ala	Thr	Ile	Thr	Gly	Tyr	Arg
				110					115					120
Ile	Arg	His	His	Pro	Glu	His	Phe	Ser	Gly	Arg	Pro	Arg	Glu	Asp
				125					130					135
Arg	Val	Pro	His	Ser	Arg	Asn	Ser	Ile	Thr	Leu	Thr	Asn	Leu	Thr
				140					145					150
Pro	Gly	Thr	Glu	Tyr	Val	Val	Ser	Ile	Val	Ala	Leu	Asn	Gly	Arg
				155					160					165
Glu	Glu	Ser	Pro	Leu	Leu	Ile	Gly	Gln	Gln	Ser	Thr	Val	Ser	Asp
				170					175					180
Val	Pro	Arg	Asp	Leu	Glu	Val	Val	Ala	Ala	Thr	Pro	Thr	Ser	Leu

185	190	195
Leu Ile Ser Trp Asp Ala Pro Ala Val Thr Val Arg Tyr Tyr Arg		
200	205	210
Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu Phe		
215	220	225
Thr Val Pro Gly Ser Lys Ser Thr Ala Thr Ile Ser Gly Leu Lys		
230	235	240
Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Gly Arg		
245	250	255
Gly Asp Ser Pro Ala Ser Ser Lys Pro Ile Ser Ile Asn Tyr Arg		
260	265	270
Thr Glu Ile Asp Lys Pro Ser Met Ala Ile Pro Ala Pro Thr Asp		
275	280	285
Leu Lys Phe Thr Gln Val Thr Pro Thr Ser Leu Ser Ala Gln Trp		
290	295	300
Thr Pro Pro Asn Val Gln Leu Thr Gly Tyr Arg Val Arg Val Thr		
305	310	315
Pro Lys Glu Lys Thr Gly Pro Met Lys Glu Ile Asn Leu Ala Pro		
320	325	330
Asp Ser Ser Ser Val Val Val Ser Gly Leu Met Val Ala Thr Lys		
335	340	345
Tyr Glu Val Ser Val Tyr Ala Leu Lys Asp Thr Leu Thr Ser Arg		
350	355	360
Pro Ala Gln Gly Val Val Thr Thr Leu Glu		
365	370	

<210> 18

<211> 457

<212> PRT

<213> Artificial Sequence

<220>

<223> fibronectin fragment named CHV-179

<400> 18

Pro Thr Asp Leu Arg Phe Thr Asn Ile Gly Pro Asp Thr Met Arg

1 5 10 15

Val Thr Trp Ala Pro Pro Pro Ser Ile Asp Leu Thr Asn Phe Leu

20 25 30

Val Arg Tyr Ser Pro Val Lys Asn Glu Glu Asp Val Ala Glu Leu

35 40 45

Ser Ile Ser Pro Ser Asp Asn Ala Val Val Leu Thr Asn Leu Leu

50 55 60

Pro Gly Thr Glu Tyr Val Val Ser Val Ser Ser Val Tyr Glu Gln

65 70 75

His Glu Ser Thr Pro Leu Arg Gly Arg Gln Lys Thr Gly Leu Asp

80 85 90

Ser Pro Thr Gly Ile Asp Phe Ser Asp Ile Thr Ala Asn Ser Phe

95 100 105

Thr Val His Trp Ile Ala Pro Arg Ala Thr Ile Thr Gly Tyr Arg

110 115 120

Ile Arg His His Pro Glu His Phe Ser Gly Arg Pro Arg Glu Asp			
	125	130	135
Arg Val Pro His Ser Arg Asn Ser Ile Thr Leu Thr Asn Leu Thr			
	140	145	150
Pro Gly Thr Glu Tyr Val Val Ser Ile Val Ala Leu Asn Gly Arg			
	155	160	165
Glu Glu Ser Pro Leu Leu Ile Gly Gln Gln Ser Thr Val Ser Asp			
	170	175	180
Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr Pro Thr Ser Leu			
	185	190	195
Leu Ile Ser Trp Asp Ala Pro Ala Val Thr Val Arg Tyr Tyr Arg			
	200	205	210
Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu Phe			
	215	220	225
Thr Val Pro Gly Ser Lys Ser Thr Ala Thr Ile Ser Gly Leu Lys			
	230	235	240
Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Gly Arg			
	245	250	255
Gly Asp Ser Pro Ala Ser Ser Lys Pro Ile Ser Ile Asn Tyr Arg			
	260	265	270
Thr Glu Ile Asp Lys Pro Ser Met Asn Val Ser Pro Pro Arg Arg			
	275	280	285
Ala Arg Val Thr Asp Ala Thr Glu Thr Thr Ile Thr Ile Ser Trp			
	290	295	300
Arg Thr Lys Thr Glu Thr Ile Thr Gly Phe Gln Val Asp Ala Val			
	305	310	315

Pro Ala Asn Gly Gln Thr Pro Ile Gln Arg Thr Ile Lys Pro Asp
320 325 330
Val Arg Ser Tyr Thr Ile Thr Gly Leu Gln Pro Gly Thr Asp Tyr
335 340 345
Lys Ile Tyr Leu Tyr Thr Leu Asn Asp Asn Ala Arg Ser Ser Pro
350 355 360
Val Val Ile Asp Ala Ser Thr Ala Ile Asp Ala Pro Ser Asn Leu
365 370 375
Arg Phe Leu Ala Thr Thr Pro Asn Ser Leu Leu Val Ser Trp Gln
380 385 390
Pro Pro Arg Ala Arg Ile Thr Gly Tyr Ile Ile Lys Tyr Glu Lys
395 400 405
Pro Gly Ser Pro Pro Arg Glu Val Val Pro Arg Pro Arg Pro Gly
410 415 420
Val Thr Glu Ala Thr Ile Thr Gly Leu Glu Pro Gly Thr Glu Tyr
425 430 435
Thr Ile Tyr Val Ile Ala Leu Lys Asn Asn Gln Lys Ser Glu Pro
440 445 450
Leu Ile Gly Arg Lys Lys Thr
455

<210> 19

<211> 459

<212> PRT

<213> Artificial Sequence

<220>

<223> fibronectin fragment named CHV-181

<400> 19

Pro Thr Asp Leu Arg Phe Thr Asn Ile Gly Pro Asp Thr Met Arg

1 5 10 15

Val Thr Trp Ala Pro Pro Pro Ser Ile Asp Leu Thr Asn Phe Leu

20 25 30

Val Arg Tyr Ser Pro Val Lys Asn Glu Glu Asp Val Ala Glu Leu

35 40 45

Ser Ile Ser Pro Ser Asp Asn Ala Val Val Leu Thr Asn Leu Leu

50 55 60

Pro Gly Thr Glu Tyr Val Val Ser Val Ser Ser Val Tyr Glu Gln

65 70 75

His Glu Ser Thr Pro Leu Arg Gly Arg Gln Lys Thr Gly Leu Asp

80 85 90

Ser Pro Thr Gly Ile Asp Phe Ser Asp Ile Thr Ala Asn Ser Phe

95 100 105

Thr Val His Trp Ile Ala Pro Arg Ala Thr Ile Thr Gly Tyr Arg

110 115 120

Ile Arg His His Pro Glu His Phe Ser Gly Arg Pro Arg Glu Asp

125 130 135

Arg Val Pro His Ser Arg Asn Ser Ile Thr Leu Thr Asn Leu Thr

140 145 150

Pro Gly Thr Glu Tyr Val Val Ser Ile Val Ala Leu Asn Gly Arg

155	160	165
Glu Glu Ser Pro Leu Leu Ile Gly Gln Gln Ser Thr Val Ser Asp		
170	175	180
Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr Pro Thr Ser Leu		
185	190	195
Leu Ile Ser Trp Asp Ala Pro Ala Val Thr Val Arg Tyr Tyr Arg		
200	205	210
Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu Phe		
215	220	225
Thr Val Pro Gly Ser Lys Ser Thr Ala Thr Ile Ser Gly Leu Lys		
230	235	240
Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Gly Arg		
245	250	255
Gly Asp Ser Pro Ala Ser Ser Lys Pro Ile Ser Ile Asn Tyr Arg		
260	265	270
Thr Glu Ile Asp Lys Pro Ser Met Ala Ile Pro Ala Pro Thr Asp		
275	280	285
Leu Lys Phe Thr Gln Val Thr Pro Thr Ser Leu Ser Ala Gln Trp		
290	295	300
Thr Pro Pro Asn Val Gln Leu Thr Gly Tyr Arg Val Arg Val Thr		
305	310	315
Pro Lys Glu Lys Thr Gly Pro Met Lys Glu Ile Asn Leu Ala Pro		
320	325	330
Asp Ser Ser Ser Val Val Val Ser Gly Leu Met Val Ala Thr Lys		
335	340	345
Tyr Glu Val Ser Val Tyr Ala Leu Lys Asp Thr Leu Thr Ser Arg		

350 355 360
Pro Ala Gln Gly Val Val Thr Thr Leu Glu Asn Val Ser Pro Pro
365 370 375
Arg Arg Ala Arg Val Thr Asp Ala Thr Glu Thr Thr Ile Thr Ile
380 385 390
Ser Trp Arg Thr Lys Thr Glu Thr Ile Thr Gly Phe Gln Val Asp
395 400 405
Ala Val Pro Ala Asn Gly Gln Thr Pro Ile Gln Arg Thr Ile Lys
410 415 420
Pro Asp Val Arg Ser Tyr Thr Ile Thr Gly Leu Gln Pro Gly Thr
425 430 435
Asp Tyr Lys Ile Tyr Leu Tyr Thr Leu Asn Asp Asn Ala Arg Ser
440 445 450
Ser Pro Val Val Ile Asp Ala Ser Thr
455

<210> 20

<211> 276

<212> PRT

<213> Artificial Sequence

<220>

<223> fibronectin fragment named H-275-Cys

<400> 20

Met	Ala	Ala	Ser	Ala	Ile	Pro	Ala	Pro	Thr	Asp	Leu	Lys	Phe	Thr
1				5					10					15
Gln	Val	Thr	Pro	Thr	Ser	Leu	Ser	Ala	Gln	Trp	Thr	Pro	Pro	Asn
				20					25					30
Val	Gln	Leu	Thr	Gly	Tyr	Arg	Val	Arg	Val	Thr	Pro	Lys	Glu	Lys
				35					40					45
Thr	Gly	Pro	Met	Lys	Glu	Ile	Asn	Leu	Ala	Pro	Asp	Ser	Ser	Ser
				50					55					60
Val	Val	Val	Ser	Gly	Leu	Met	Val	Ala	Thr	Lys	Tyr	Glu	Val	Ser
				65					70					75
Val	Tyr	Ala	Leu	Lys	Asp	Thr	Leu	Thr	Ser	Arg	Pro	Ala	Gln	Gly
				80					85					90
Val	Val	Thr	Thr	Leu	Glu	Asn	Val	Ser	Pro	Pro	Arg	Arg	Ala	Arg
				95					100					105
Val	Thr	Asp	Ala	Thr	Glu	Thr	Thr	Ile	Thr	Ile	Ser	Trp	Arg	Thr
				110					115					120
Lys	Thr	Glu	Thr	Ile	Thr	Gly	Phe	Gln	Val	Asp	Ala	Val	Pro	Ala
				125					130					135
Asn	Gly	Gln	Thr	Pro	Ile	Gln	Arg	Thr	Ile	Lys	Pro	Asp	Val	Arg
				140					145					150
Ser	Tyr	Thr	Ile	Thr	Gly	Leu	Gln	Pro	Gly	Thr	Asp	Tyr	Lys	Ile
				155					160					165
Tyr	Leu	Tyr	Thr	Leu	Asn	Asp	Asn	Ala	Arg	Ser	Ser	Pro	Val	Val
				170					175					180
Ile	Asp	Ala	Ser	Thr	Ala	Ile	Asp	Ala	Pro	Ser	Asn	Leu	Arg	Phe
				185					190					195

Leu Ala Thr Thr Pro Asn Ser Leu Leu Val Ser Trp Gln Pro Pro
200 205 210
Arg Ala Arg Ile Thr Gly Tyr Ile Ile Lys Tyr Glu Lys Pro Gly
215 220 225
Ser Pro Pro Arg Glu Val Val Pro Arg Pro Arg Pro Gly Val Thr
230 235 240
Glu Ala Thr Ile Thr Gly Leu Glu Pro Gly Thr Glu Tyr Thr Ile
245 250 255
Tyr Val Ile Ala Leu Lys Asn Asn Gln Lys Ser Glu Pro Leu Ile
260 265 270
Gly Arg Lys Lys Thr Cys
275

<210> 21

<211> 38

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 12S

<400> 21

aaaccatggc agctagcgct attcctgcac caactgac

38

<210> 22

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 14A

<400> 22

aaaggatccc taactagtct ttitccitcc aatcag

36

<210> 23

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> primer Cys-A

<400> 23

aaaagcggcc gctagcgcaa gccatggtct gtttctgtg

40

<210> 24

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> primer Cys-S

<400> 24

aaaagcggcc gcactagtgc atagggatcc ggctgagcaa c 41

<210> 25

<211> 658

<212> PRT

<213> Artificial Sequence

<220>

<223> fibronectin fragment named CH-296Na

<400> 25

Met Pro Thr Asp Leu Arg Phe Thr Asn Ile Gly Pro Asp Thr Met Arg

1 5 10 15

Val Thr Trp Ala Pro Pro Pro Ser Ile Asp Leu Thr Asn Phe Leu Val

20 25 30

Arg Tyr Ser Pro Val Lys Asn Glu Glu Asp Val Ala Glu Leu Ser Ile

35 40 45

Ser Pro Ser Asp Asn Ala Val Val Leu Thr Asn Leu Leu Pro Gly Thr

50 55 60
Glu Tyr Val Val Ser Val Ser Ser Val Tyr Glu Gln His Glu Ser Thr
65 70 75 80
Pro Leu Arg Gly Arg Gln Lys Thr Gly Leu Asp Ser Pro Thr Gly Ile
85 90 95
Asp Phe Ser Asp Ile Thr Ala Asn Ser Phe Thr Val His Trp Ile Ala
100 105 110
Pro Arg Ala Thr Ile Thr Gly Tyr Arg Ile Arg His His Pro Glu His
115 120 125
Phe Ser Gly Arg Pro Arg Glu Asp Arg Val Pro His Ser Arg Asn Ser
130 135 140
Ile Thr Leu Thr Asn Leu Thr Pro Gly Thr Glu Tyr Val Val Ser Ile
145 150 155 160
Val Ala Leu Asn Gly Arg Glu Glu Ser Pro Leu Leu Ile Gly Gln Gln
165 170 175
Ser Thr Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr
180 185 190
Pro Thr Ser Leu Leu Ile Ser Trp Asp Ala Pro Ala Val Thr Val Arg
195 200 205
Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
210 215 220
Glu Phe Thr Val Pro Gly Ser Lys Ser Thr Ala Thr Ile Ser Gly Leu
225 230 235 240
Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Gly Arg
245 250 255
Gly Asp Ser Pro Ala Ser Ser Lys Pro Ile Ser Ile Asn Tyr Arg Thr

260	265	270
Glu Ile Asp Lys Pro Ser Gln Met Gln Val Thr Asp Val Gln Asp Asn		
275	280	285
Ser Ile Ser Val Lys Trp Leu Pro Ser Ser Ser Pro Val Thr Gly Tyr		
290	295	300
Arg Val Thr Thr Thr Pro Lys Asn Gly Pro Gly Pro Thr Lys Thr Lys		
305	310	315
Thr Ala Gly Pro Asp Gln Thr Glu Met Thr Ile Glu Gly Leu Gln Pro		
325	330	335
Thr Val Glu Tyr Val Val Ser Val Tyr Ala Gln Asn Pro Ser Gly Glu		
340	345	350
Ser Gln Pro Leu Val Gln Thr Ala Val Thr Ala Ile Pro Ala Pro Thr		
355	360	365
Asp Leu Lys Phe Thr Gln Val Thr Pro Thr Ser Leu Ser Ala Gln Trp		
370	375	380
Thr Pro Pro Asn Val Gln Leu Thr Gly Tyr Arg Val Arg Val Thr Pro		
385	390	395
Lys Glu Lys Thr Gly Pro Met Lys Glu Ile Asn Leu Ala Pro Asp Ser		
405	410	415
Ser Ser Val Val Val Ser Gly Leu Met Val Ala Thr Lys Tyr Glu Val		
420	425	430
Ser Val Tyr Ala Leu Lys Asp Thr Leu Thr Ser Arg Pro Ala Gln Gly		
435	440	445
Val Val Thr Thr Leu Glu Asn Val Ser Pro Pro Arg Arg Ala Arg Val		
450	455	460
Thr Asp Ala Thr Glu Thr Thr Ile Thr Ile Ser Trp Arg Thr Lys Thr		

465 470 475 480
 Glu Thr Ile Thr Gly Phe Gln Val Asp Ala Val Pro Ala Asn Gly Gln
 485 490 495
 Thr Pro Ile Gln Arg Thr Ile Lys Pro Asp Val Arg Ser Tyr Thr Ile
 500 505 510
 Thr Gly Leu Gln Pro Gly Thr Asp Tyr Lys Ile Tyr Leu Tyr Thr Leu
 515 520 525
 Asn Asp Asn Ala Arg Ser Ser Pro Val Val Ile Asp Ala Ser Thr Ala
 530 535 540
 Ile Asp Ala Pro Ser Asn Leu Arg Phe Leu Ala Thr Thr Pro Asn Ser
 545 550 555 560
 Leu Leu Val Ser Trp Gln Pro Pro Arg Ala Arg Ile Thr Gly Tyr Ile
 565 570 575
 Ile Lys Tyr Glu Lys Pro Gly Ser Pro Pro Arg Glu Val Val Pro Arg
 580 585 590
 Pro Arg Pro Gly Val Thr Glu Ala Thr Ile Thr Gly Leu Glu Pro Gly
 595 600 605
 Thr Glu Tyr Thr Ile Tyr Val Ile Ala Leu Lys Asn Asn Gln Lys Ser
 610 615 620
 Glu Pro Leu Ile Gly Arg Lys Lys Thr Asp Glu Leu Pro Gln Leu Val
 625 630 635 640
 Thr Leu Pro His Pro Asn Leu His Gly Pro Glu Ile Leu Asp Val Pro
 645 650 655
 Ser Thr

<210> 26

<211> 1989

<212> DNA

<213> Artificial Sequence

<220>

<223> polynucleotide coding CH-296Na

<400> 26

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catatgccc a ctgacctgcg attcaccaac attgggccag acaccatgcg tgtcacctgg      60
gtccacccc catccattga tttaaccaac ttccctgggtgc gttactcgcc tgtgaaaaat     120
gaggaagatg ttgcagagtt gtcaatttct ccttcagaca atgcagtggt cttaacaaat     180
ctcctgcctg gtacagaata tgtagtgagt gtctccagtg tctacgaaca acatgagagc     240
acacctctta gaggaagaca gaaaacaggt cttgattccc caactggcat tgacttttct     300
gatattactg ccaactcttt tactgtgcac tggattgctc ctcgagccac catcactggc     360
tacaggatcc gccatcatcc cgagcacttc agtggggagac ctcgagaaga tcgggtgccc     420
cactctcgga attccatcac cctcaccaac ctcactccag gcacagagta tgtggtcagc     480
atcgttgctc ttaatggcag agaggaaagt cccttattga ttggccaaca atcaacagtt     540
tctgatgttc cgagggacct ggaagtgttt gctgcgaccc ccaccagcct actgatcagc     600
tgggatgctc ctgctgtcac agtgagatat tacaggatca cttacggaga aacaggagga     660
aatagccctg tccaggagtt cactgtgcct gggagcaagt ctacagctac catcagcggc     720
cttaaacctg gatttgatta taccatcact gtgtatgctg tcactggccg tggagacagc     780
cccgcaagca gcaagccaat ttccattaat taccgaacag aaattgacaa accatcccag     840
atgcaagtga ccgatgttca ggacaacagc attagtgtca agtggctgcc ttcaagttcc     900
cctgttactg gttacagagt aaccaccact cccaaaaatg gaccaggacc acaaaaaact     960
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aaaacigcag gtccagatca aacagaaatg actattgaag gcttgagcc cacagtggag 1020
tatgtggtta gtgtctatgc tcagaatcca agcggagaga gtcagcctct gggtcagact 1080
gcagtaaccg ctattcctgc accaactgac ctgaagtcca ctcagggtcac acccacaagc 1140
ctgagcgccc agtggacacc acccaatggt cagctcactg gatatcgagt gcgggtgacc 1200
cccaaggaga agaccggacc aatgaaagaa atcaaccttg ctctgacag ctcatccgtg 1260
gttgtatcag gacttatggt ggccaccaa tatgaagtga gtgtctatgc tcttaaggac 1320
actttgacaa gcagaccagc tcagggtggt gtcaccactc tggagaatgt cagcccacca 1380
agaagggtc gtgtgacaga tgctactgag accaccatca ccattagctg gagaaccaag 1440
actgagacga tcactggctt ccaagttgat gccgttccag ccaatggcca gactccaatc 1500
cagagaacca tcaagccaga tgcagaagc tacaccatta caggtttaca accaggcact 1560
gactacaaga tctacctgta caccttgaat gacaatgctc ggagctcccc tgtggtcatc 1620
gacgcctcca ctgccattga tgcaccatcc aacctgcgtt tctggccac cacacccaat 1680
tcttgctgg tatcatggca gccgccacgt gccaggatta ccggctacat catcaagtat 1740
gagaagcctg ggtctcctcc cagagaagtg gtccctcggc cccgccctgg tgtcacagag 1800
gctactatta ctggcctgga accgggaacc gaatatataa ttatgtcat tggcctgaag 1860
aataatcaga agagcgagcc cctgattgga aggaaaaaga cagacgagct tccccactg 1920
gtaacccttc cacaccccaa tcttcatgga ccagagatct tggatgttcc ttccacataa 1980
tagaagctt 1989

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<210> 27

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer CH-296Na1

<400> 27

atcatatgcc cactgacctg cg

22

<210> 28

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer CH-296Na2

<400> 28

ataagcttct attatgtgga agg

23

<210> 29

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer CH-296Na3

<400> 29

accatcactg gctacaggat cc

22